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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,428	03/31/2004	Jaswant Sandhu	8775-012	7624
20575 7590 06/22/2007 MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			EXAMINER ADAMS, GREGORY W	
			ART UNIT 3652	PAPER NUMBER
			MAIL DATE 06/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/815,428

Applicant(s)

SANDHU ET AL.

Examiner

Gregory W. Adams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 36-42, 44 and 45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-42, 44 and 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36-39, 42 & 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. (WO 00/02803) (previously cited) in view of Kobayashi et al. (US 6,216,883) (previously cited).

With respect to claim 36, referring to FIGS. 1-7 Cameron et al. discloses a method for moving wafers comprising positioning robotic hand blades 24, 116, inserting a hand 108, 116 into a receptacle 141 having wafers spaced by pitch, grasping wafers 140 with blades 24, 116, withdrawing a hand 108, 116, positioning a hand 108, 116, inserting a hand 108, 116 into a second receptacle 141, and releasing wafers. It is noted that "pitch" is merely another word for spacing which Cameron clearly discloses. Cameron et al. does not disclose peripheral edge contact.

Kobayashi discloses a method for moving a plurality of wafers comprising: positioning a plurality of stacked end-effectors 1 of a robotic wherein each end-effector includes a blade 1; inserting a hand; mechanically grasping, by contact with opposing peripheral edges (FIGS. 4-10), a selected number of wafers by a corresponding number of blades; withdrawing a hand; positioning a hand; inserting a hand; and releasing a selected number of wafers into a second wafer receptacle. Kobayshi teaches peripheral

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edge contact by multi-bladed robot hands that increases speed by preventing the wafer from "jumping out" and improves mounting accuracy. C1/L50-62. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Cameron et al. to include a step of peripherally edge grasping, as per the teachings of Kobayashi, to increase speed and accuracy.

With respect to claim 37, referring to FIGS. 1-7 Cameron et al. discloses a hand 24 which retrieves one wafer (or 2, 3, 4, 5).

With respect to claim 38, referring to FIGS. 1-7 Cameron et al. discloses a method for moving wafers further comprising sensing wafer presence 58.

With respect to claim 39, referring to FIGS. 1-7 Cameron et al. discloses sensing wafer presence 58 and wafer position (page 4, Ins. 9-20) further comprises sensing wafer peripheral zone. Page 4, Ins. 9-20.

With respect to claim 42, referring to FIGS. 1-7 Cameron et al. discloses sensing wafer presence 58 and wafer position comprises optically sensing 58 a wafer peripheral zone. Page 4, Ins. 9-20.

With respect to claim 44, referring to FIGS. 1-7 Cameron et al. discloses releasing wafers comprises arraying wafers in a second wafer receptacle.

With respect to claim 45, referring to FIGS. 1-7 Cameron et al. discloses a robotic hand which retains one wafer.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. (WO 00/02803) (previously cited) in view of Kobayashi et al. (US 6,216,883) (previously cited) and Bacchi et al. (US 6,275,748) (previously cited). Cameron et al. discloses position and presence sensors, and does not disclose detection wafer position or presence via wafer pad displacement, or optical wafer pad displacement. Referring to FIGS. 1-18 Bacchi et al. discloses sensing wafer presence (col. 2, Ins. 20-24) comprises detecting wafer displacement of a wafer contact pad 222 comprises optically detecting 228, 230 (col. 12, Ins. 51-60) displacement of a wafer contact pad 222 (col. 12, Ins. 51-60) to reduce moving mechanisms within a robotic hand thereby reducing contamination within a wafer receptacle. Col. 2, Ins. 20-50. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robotic hand blade of Cameron et al. to include sensing the displacement of a wafer pad by optically sensing pad displacement, as per the teachings of Bacchi et al., to reduce moving mechanisms within a robotic hand thereby reducing contamination within a wafer receptacle.

### ***Response to Arguments***

Applicant's arguments with respect to claims 36-42 & 44-45 have been considered but are moot in view of the new ground(s) of rejection necessitated by at least the amendment to claim 36. Claim 36 now requires peripheral edge contact during grasping.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (571) 272-8101. The examiner can normally be reached on M-Th, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene O. Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GWA

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER